

=> file caplus  
COST IN U.S. DOLLARS  
FULL ESTIMATED COST

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|  | 0.42                | 0.42             |

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FILE COVERS 1907 - 4 Mar 2003 VOL 138 ISS 10  
FILE LAST UPDATED: 3 Mar 2003 (20030303/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s fabric or textile
    86537 FABRIC
    77634 FABRICS
    119278 FABRIC
        (FABRIC OR FABRICS)
    70798 TEXTILE
    76328 TEXTILES
    111046 TEXTILE
        (TEXTILE OR TEXTILES)
L1     183303 FABRIC OR TEXTILE

=> s (paper or cellulose) (1)yarns (1)warp direction
    546983 PAPER
    42776 PAPERS
    571478 PAPER
        (PAPER OR PAPERS)
    299939 CELLULOSE
    3908 CELLULOSES
    300502 CELLULOSE
        (CELLULOSE OR CELLULOSES)
    20240 YARNS
    6946 WARP
    734 WARPS
    7378 WARP
        (WARP OR WARPS)
    254857 DIRECTION
    73272 DIRECTIONS
    313075 DIRECTION
        (DIRECTION OR DIRECTIONS)
    355 WARP DIRECTION
        (WARP (W) DIRECTION)
L2     9 (PAPER OR CELLULOSE) (L) YARNS (L) WARP DIRECTION

=> s (paper or cellulose) (1)yarns (1)weft direction
    546983 PAPER
    42776 PAPERS
```

571478 PAPER  
     (PAPER OR PAPERS)  
 299939 CELLULOSE  
     3908 CELLULOSES  
 300502 CELLULOSE  
     (CELLULOSE OR CELLULOSES)  
 20240 YARNS  
     1585 WEFT  
     130 WEFTS  
     1684 WEFT  
     (WEFT OR WEFTS)  
 254857 DIRECTION  
     73272 DIRECTIONS  
 313075 DIRECTION  
     (DIRECTION OR DIRECTIONS)  
     180 WEFT DIRECTION  
         (WEFT (W) DIRECTION)  
 L3      3 (PAPER OR CELLULOSE) (L) YARNS (L) WEFT DIRECTION  
  
 => s (paper or cellulose) (l)yarns(l)warp  
     546983 PAPER  
     42776 PAPERS  
     571478 PAPER  
         (PAPER OR PAPERS)  
     299939 CELLULOSE  
         3908 CELLULOSES  
     300502 CELLULOSE  
         (CELLULOSE OR CELLULOSES)  
     20240 YARNS  
         6946 WARP  
         734 WARPS  
         7378 WARP  
         (WARP OR WARPS)  
 L4      181 (PAPER OR CELLULOSE) (L) YARNS (L) WARP  
  
 => s (paper or cellulose) (l)yarns(l)weft  
     546983 PAPER  
     42776 PAPERS  
     571478 PAPER  
         (PAPER OR PAPERS)  
     299939 CELLULOSE  
         3908 CELLULOSES  
     300502 CELLULOSE  
         (CELLULOSE OR CELLULOSES)  
     20240 YARNS  
         1585 WEFT  
         130 WEFTS  
         1684 WEFT  
         (WEFT OR WEFTS)  
 L5      58 (PAPER OR CELLULOSE) (L) YARNS (L) WEFT  
  
 => d his  
  
 (FILE 'HOME' ENTERED AT 07:32:32 ON 04 MAR 2003)  
  
 FILE 'CAPLUS' ENTERED AT 07:33:28 ON 04 MAR 2003  
 L1      183303 S FABRIC OR TEXTILE  
 L2      9 S (PAPER OR CELLULOSE) (L) YARNS (L) WARP DIRECTION  
 L3      3 S (PAPER OR CELLULOSE) (L) YARNS (L) WEFT DIRECTION  
 L4      181 S (PAPER OR CELLULOSE) (L) YARNS (L) WARP  
 L5      58 S (PAPER OR CELLULOSE) (L) YARNS (L) WEFT  
  
 => s density(l)20  
     212288 DENSITY

```

98964 DENSITIES
290327 DENSITY
(DENSITY OR DENSITIES)
1989722 20
L6      10074 DENSITY(L)20

=> s density(l)20 yarns per inch
212288 DENSITY
98964 DENSITIES
290327 DENSITY
(DENSITY OR DENSITIES)
1989722 20
20240 YARNS
444492 PER
1005 PERS
445434 PER
(PER OR PERS)
4003 INCH
1409 INCHES
5201 INCH
(INCH OR INCHES)
0 20 YARNS PER INCH
(20(W) YARNS (W) PER (W) INCH)
L7      0 DENSITY(L)20 YARNS PER INCH

=> s density(l)20 yarns(l)inch
212288 DENSITY
98964 DENSITIES
290327 DENSITY
(DENSITY OR DENSITIES)
1989722 20
20240 YARNS
4 20 YARNS
(20(W) YARNS)
4003 INCH
1409 INCHES
5201 INCH
(INCH OR INCHES)
L8      0 DENSITY(L)20 YARNS(L)INCH

=> d his

(FILE 'HOME' ENTERED AT 07:32:32 ON 04 MAR 2003)

FILE 'CPLUS' ENTERED AT 07:33:28 ON 04 MAR 2003
L1      183303 S FABRIC OR TEXTILE
L2      9 S (PAPER OR CELLULOSE) (L) YARNS (L) WARP DIRECTION
L3      3 S (PAPER OR CELLULOSE) (L) YARNS (L) WEFT DIRECTION
L4      181 S (PAPER OR CELLULOSE) (L) YARNS (L) WARP
L5      58 S (PAPER OR CELLULOSE) (L) YARNS (L) WEFT
L6      10074 S DENSITY(L)20
L7      0 S DENSITY(L)20 YARNS PER INCH
L8      0 S DENSITY(L)20 YARNS(L)INCH

=> s density and 6 (l)yarns
212288 DENSITY
98964 DENSITIES
290327 DENSITY
(DENSITY OR DENSITIES)
3235506 6
20240 YARNS
3273 6 (L) YARNS
L9      40 DENSITY AND 6 (L) YARNS

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=> d his

(FILE 'HOME' ENTERED AT 07:32:32 ON 04 MAR 2003)

FILE 'CAPLUS' ENTERED AT 07:33:28 ON 04 MAR 2003

L1 183303 S FABRIC OR TEXTILE  
L2 9 S (PAPER OR CELLULOSE) (L) YARNS (L) WARP DIRECTION  
L3 3 S (PAPER OR CELLULOSE) (L) YARNS (L) WEFT DIRECTION  
L4 181 S (PAPER OR CELLULOSE) (L) YARNS (L) WARP  
L5 58 S (PAPER OR CELLULOSE) (L) YARNS (L) WEFT  
L6 10074 S DENSITY (L) 20  
L7 0 S DENSITY (L) 20 YARNS PER INCH  
L8 0 S DENSITY (L) 20 YARNS (L) INCH  
L9 40 S DENSITY AND 6 (L) YARNS

=> s l1 and l4 and l5  
L10 42 L1 AND L4 AND L5

=> s l10 and l9  
L11 0 L10 AND L9

=> s weaving(l)yarns(l)wide loom  
2993 WEAVING  
10 WEAVINGS  
2997 WEAVING  
(WEAVING OR WEAVINGS)  
20240 YARNS  
267282 WIDE  
11 WIDES  
267292 WIDE  
(WIDE OR WIDES)  
562 LOOM  
337 LOOMS  
750 LOOM  
(LOOM OR LOOMS)  
0 WIDE LOOM  
(WIDE(W) LOOM)  
L12 0 WEAVING (L) YARNS (L) WIDE LOOM

=> s weaving(l)wide loom  
2993 WEAVING  
10 WEAVINGS  
2997 WEAVING  
(WEAVING OR WEAVINGS)  
267282 WIDE  
11 WIDES  
267292 WIDE  
(WIDE OR WIDES)  
562 LOOM  
337 LOOMS  
750 LOOM  
(LOOM OR LOOMS)  
0 WIDE LOOM  
(WIDE(W) LOOM)  
L13 0 WEAVING (L) WIDE LOOM

=> s weaving  
2993 WEAVING  
10 WEAVINGS  
L14 2997 WEAVING  
(WEAVING OR WEAVINGS)

=> d his

(FILE 'HOME' ENTERED AT 07:32:32 ON 04 MAR 2003)

FILE 'CAPLUS' ENTERED AT 07:33:28 ON 04 MAR 2003

L1 183303 S FABRIC OR TEXTILE  
L2 9 S (PAPER OR CELLULOSE) (L) YARNS (L) WARP DIRECTION  
L3 3 S (PAPER OR CELLULOSE) (L) YARNS (L) WEFT DIRECTION  
L4 181 S (PAPER OR CELLULOSE) (L) YARNS (L) WARP  
L5 58 S (PAPER OR CELLULOSE) (L) YARNS (L) WEFT  
L6 10074 S DENSITY (L) 20  
L7 0 S DENSITY (L) 20 YARNS PER INCH  
L8 0 S DENSITY (L) 20 YARNS (L) INCH  
L9 40 S DENSITY AND 6 (L) YARNS  
L10 42 S L1 AND L4 AND L5  
L11 0 S L10 AND L9  
L12 0 S WEAVING (L) YARNS (L) WIDE LOOM  
L13 0 S WEAVING (L) WIDE LOOM  
L14 2997 S WEAVING

=> s l10 and l14  
L15 2 L10 AND L14

=> s weaving(l) tight weave  
2993 WEAVING  
10 WEAVINGS  
2997 WEAVING  
(WEAVING OR WEAVINGS)  
38752 TIGHT  
31 TIGHTS  
38776 TIGHT  
(TIGHT OR TIGHTS)  
2285 WEAVE  
240 WEAVES  
2443 WEAVE  
(WEAVE OR WEAVES)  
11 TIGHT WEAVE  
(TIGHT (W) WEAVE)  
L16 0 WEAVING (L) TIGHT WEAVE

=> s tightly(l) woven  
29067 TIGHTLY  
18305 WOVEN  
88 WOVENS  
18370 WOVEN  
(WOVEN OR WOVENS)  
L17 148 TIGHTLY (L) WOVEN

=> d his

(FILE 'HOME' ENTERED AT 07:32:32 ON 04 MAR 2003)

FILE 'CAPLUS' ENTERED AT 07:33:28 ON 04 MAR 2003

L1 183303 S FABRIC OR TEXTILE  
L2 9 S (PAPER OR CELLULOSE) (L) YARNS (L) WARP DIRECTION  
L3 3 S (PAPER OR CELLULOSE) (L) YARNS (L) WEFT DIRECTION  
L4 181 S (PAPER OR CELLULOSE) (L) YARNS (L) WARP  
L5 58 S (PAPER OR CELLULOSE) (L) YARNS (L) WEFT  
L6 10074 S DENSITY (L) 20  
L7 0 S DENSITY (L) 20 YARNS PER INCH  
L8 0 S DENSITY (L) 20 YARNS (L) INCH  
L9 40 S DENSITY AND 6 (L) YARNS  
L10 42 S L1 AND L4 AND L5  
L11 0 S L10 AND L9  
L12 0 S WEAVING (L) YARNS (L) WIDE LOOM  
L13 0 S WEAVING (L) WIDE LOOM

L14 2997 S WEAVING  
L15 2 S L10 AND L14  
L16 0 S WEAVING(L) TIGHT WEAVE  
L17 148 S TIGHTLY(L)WOVEN

=> s l14 and l17  
L18 7 L14 AND L17

=> s l10 and l17  
L19 1 L10 AND L17

=> d l19 bib,abs

L19 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS

AN 2003:35344 CAPLUS

DN 138:74394

TI **Tightly woven paper textile** products,  
forming **woven fabrics** and applying a backing

IN Samel, Hiram M.

PA Merida Meridian, Inc., USA

SO U.S., 9 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

|      | PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|------|----------------|------|----------|-----------------|----------|
| PI   | US 6506697     | B1   | 20030114 | US 1999-368766  | 19990805 |
| PRAI | US 1999-368766 |      | 19990805 |                 |          |

AB The **textile** material comprises a **tightly woven**  
**paper** (**warp** and **weft paper**  
**yarns**) having a backing applied on only one side. The tight weave  
allows the backing to be applied as a liq., where curing causes the liq.  
to harden. The backing confers addnl. strength and durability to the  
**paper fabric** and allows mass prodn. of **paper**  
**fabrics** by the formation of a continuous sheet that can be cut to  
desired dimensions and shapes without fraying at the edges.

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d l18 1-7 bib,abs

L18 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2003 ACS

AN 2002:654615 CAPLUS

DN 137:178072

TI Glass cloth for printed circuit boards suitable in laser drilling

IN Kimura, Yasuyuki; Fujimura, Yoshinobu

PA Asahi-Schwebel Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

|      | PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|------|---------------|------|----------|-----------------|----------|
| PI   | JP 2002242047 | A2   | 20020828 | JP 2001-40125   | 20010216 |
| PRAI | JP 2001-40125 |      | 20010216 |                 |          |

AB The title glass cloth is **tightly woven** between  
adjacent warp fibers and/or woof fibers (av. filament diam. 3-4 .mu.m; no.  
of filament 70-200 glass fibers) without clearance and give the thickness  
.1toreq.25 .mu.m. The specifications give the circuit boards precision  
controlled fine through holes and/or via holes drilled by laser beam  
drilling.

L18 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2003 ACS  
AN 2000:630785 CAPLUS  
DN 134:194481  
TI Net shape woven fabrics-2D and 3D  
AU Clarke, Steven R.  
CS T.E.A.M. Inc., Slatersville, RI, 02876, USA  
SO Journal of Industrial Textiles (2000), 30(1), 15-25  
CODEN: JINTFC; ISSN: 1528-0837  
PB Technomic Publishing Co., Inc.  
DT Journal; General Review  
LA English  
AB A review with no ref. **Weaving** technol. has been used for many years to weave net shape products to very **tightly** controlled dimensions. Numerous examples of narrow tapes, tubular fabrics, and multi-layer belting products can be found in the biomedical, automotive, and industrial fields. In more recent times 2D and 3D **woven** net shape products have expanded into polar or spiral **woven** fabrics, integrally stiffened skin panels, and tapered net shape airfoil components. This paper will review the manufg. technologies used to produce these net shape textile products as well as show examples of the finished textile products and their applications.

L18 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2003 ACS  
AN 1986:628404 CAPLUS  
DN 105:228404  
TI Evaluation of fabrics woven with durable polymeric sizing agents  
AU Moreau, Jerry P.  
CS South. Reg. Res. Cent., USDA, New Orleans, LA, 70179, USA  
SO Textile Research Journal (1986), 56(10), 627-34  
CODEN: TRJOA9; ISSN: 0040-5175  
DT Journal  
LA English  
AB Cotton warp yarns (19.7 mg/m) were sized at room temp. with a 3:1 polyurethane-polyacrylate compn. and were **woven** into a **tightly** constructed poplin fabric with **weaving** performance equiv. to a conventional starch warp. The polymers were durable to pilot-plant scouring and bleaching fabric stiffness was increased compared to the control, but overall hand was acceptable for trouser-wt. fabric. Stiffness adversely affected tearing strength slightly. Wicking and absorbancy were reduced but did not inhibit uniform dyeing in the lab. The presence of polymer did not interfere with lab. durable-press finishing or raw mercerization. The polymer was shown by IR anal. to be still present on warp yarns in dyed and mercerized samples.

L18 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2003 ACS  
AN 1970:44932 CAPLUS  
DN 72:44932  
TI Bulking of yarn  
IN Walters, Harold A.  
PA Dow Chemical Co.  
SO U.S., 4 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
FAN.CNT 1

|      | PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|------|--|------|----------|-----------------|----------|
| PI   | US 3479811   | A    | 19691125 | US 1967-686656  | 19671129 |
|      | BE 738475  | A    | 19700305 | BE 1969-738475  | 19690905 |
| PRAI | US 1967-686656   |      | 19671129 |                 |          |
| AB   | Expandable microspheres are incorporated in a thread or yarn and subsequently heated to expand the microspheres and bulk the yarn. Bulking the yarn after <b>weaving</b> or sewing provides <b>tightly</b> |      |          |                 |          |

woven fabric or locked-in sewing thread. Thus, 2.5 parts of a 10% aq. soln. of a copolymer prep'd. from (HOCH<sub>2</sub>C H<sub>2</sub>)<sub>2</sub>NH and adipic acid was added to a mixt. of 100 parts deionized H<sub>2</sub> o and 15 parts of a 30 wt. % aq. colloidal silica dispersion (Ludox HS), 1 part of a soln. contg. 2.5 wt. % K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> was added, and the pH was adjusted to 4 with HCl. An oil phase mixt. was prep'd. using 100 parts of a 4:1 mixt. of Me methacrylate and acrylonitrile and contg. 35 wt. % neopentane and 0.1 part BzO<sub>2</sub>. The oil mixt. was added to the water mixt. while stirring at 10,000 rpm, the mixt. was heated 24 hr at 80.degree. and filtered to provide a wet filter cake contg. 29.6 wt. % expandable microspheres. A coating mixt. is prep'd. by admixing a butadiene-styrene latex 81, a 25 wt. % aq. soln. of Na dodecyl diphenyl oxide disulfonate 2.7, water 207, and a 5 wt. % aq. soln. of Acrysol GS 16.2 parts. A no. 40 cotton thread was coated with a dry coating wt. of 0.084 g/10 ft, air dried at 60.degree., and expanded to twice its original diam. at 135.degree.. Silk, wool, and nylon threads were similarly expanded.

L18 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2003 ACS

AN 1967:433792 CAPLUS

DN 67:33792

TI Inked ribbons

IN Leach, Jack

PA Burlington Industries, Inc.

SO U.S., 4 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

|               |       |          |       |          |
|---------------|-------|----------|-------|----------|
| -----         | ----- | -----    | ----- | -----    |
| PI US 3317021 |       | 19670502 | US    | 19630402 |

AB An inked ribbon, which has good wear, ink retaining capacity, clarity of print, and is useful in high speed typewriters and computers, is composed of **tightly woven** synthetic multifilament thermoplastic stretch yarn, whose surface is uniformly puckered, which increases the wear and ink capacity of the ribbon, and the puckers in the fabric are extensible so as to mold around the printing element to give a clearer printing impression. Thus, a fabric (53 in. wide and 300 yd. long) was **woven** in a plain 1 .times. 1 weave using 176 ends per inch of 30-denier, 26-filament Saaba stretch nylon yarn with a twist of 7 turns in the S direction as the warp and 120 picks per inch of 30-denier, 26-filament Saaba stretch nylon yarn with 4 turns S in the filling. The Saaba yarn used was prep'd. by false twisting on a Universal 550 machine using a spindle speed between 40,000 and 240,000 rpm. with the av. speed 150,000 rpm. at the rate of 95-130 turns per inch with an av. of 121 turns per inch while heating the twisted yarn .apprx.350-440.degree.F. and at 25-50 yd./min. to give an exposure of 0.2-1.5 sec., after which the heat set yarn is annealed at 325-460.degree.F. for the same time. During this process the yarn is overfed into the twisting unit at 0.2-18% at 15-117 yd./min. A poly(acrylic acid) size was applied to the yarn for easier **weaving**. After **weaving**, the fabric was immersed in the relaxed state in water contg. 0.1% Triton X-100 at 200.degree.F. for 30 min. to form a uniformly puckered fabric with a 20% width shrinkage and a 10% length shrinkage. The fabric was frame dried at 51 inch width and 230.degree.F., heated at 350.degree.F. for 1 min. under tension (0.5 g./denier) at 50 inch width and 8% length shrinkage. The fabric was slit into ribbons and 28% ink applied based on the wt. of the pre-inked ribbon. The inked ribbon was esp. suitable for use as a typewriter ribbon because of its wear, ink pickup, and type molding characteristics.

L18 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS

AN 1959:31675 CAPLUS

DN 53:31675

OREF 53:5684i,5685a

TI Moisture regain of **tightly woven** cotton fabrics  
AU Skau, Evald L.; Honold, Edith  
CS Southern Regional Research Lab., New Orleans, LA  
SO Textile Research J. (1959), 29, 96-7  
DT Journal  
LA Unavailable  
AB cf. ibid. 21, 419-27(1951). In the chem. modification or dyeing of cotton fibers, the velocity and extent of reaction or of dye-uptake are favored by a swelling of the cellulose affording better penetration of the reactants. The mech. restraints to swelling in a **tightly woven** cotton fabric result in lower moisture regain than that for loose yarns when exposed to even moderate relative humidity.

L18 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS  
AN 1943:22453 CAPLUS  
DN 37:22453  
OREF 37:3629f-i,3630c-i  
TI Differences in structure of animal skin in the various locations on its surface as measured by the tensile strength, stretch and specific weight of leather made from it  
AU Stather, Fritz; Herfeld, Hans  
SO Collegium (1942) 1-13  
From: Chem. Zentr. 1942, I, 2093-4.  
DT Journal  
LA Unavailable  
AB An attempt was made to divide raw hide into zones of equal tensile strength, stretch and sp. wt. For the investigation Cr-tanned leather all prep'd. in exactly the same way but from different kinds of skins was available. Three south German and 3 north German heifer calfskins and 5 bull hides all in the unsplit and unshared condition and 5 south German heifer calfskins and 5 bull hides that had been shaved and split were used. Test pieces for tensile strength, stretch and sp. wt. were died out at intervals of 5 cm. over the entire surface of the leathers. The test pieces were alternately parallel (.dblvert.) and perpendicular (.perp.) to the backbone. There were 400-500 detns. per hide. Values are given for each property at each location on every skin and also av. values for each location on hides of the same kind. Zones of min. tensile strength are found in the side of all kinds of skins; shanks have lower strength than the side. In the middle zone strength was always greater in the .perp. direction than in the .dblvert. direction. Along the backbone there is a strip that is low in strength so that strength in the .dblvert. is lower than in the .perp. direction. In the neck, strength is greatest in the .dblvert. direction for all skins, while in the butt the opposite direction is stronger. The strength of bull hides is decreased by splitting. Splitting heifer calfskin decreased tensile strength in the .perp. direction but did not change it in the .dblvert. direction. Sides (fore and rear flanks) show zones of high stretch. In very many cases stretch in the .perp. direction is less than in the .dblvert. direction. Stretch is usually low in the butt. The zones of high and low stretch are distributed unevenly over the whole skin surface, without any characteristic differences in different kinds of skins. In general, splitting increases stretch. Sp. wt. is high in the shanks but quite low in the remainder of the side because of its open structure. In the neck there are zones of low and medium sp. wt., while in the butt there is a zone of very high sp. wt. In split hides the zone of max. sp. wt. in the butt is less pronounced. The regularity of tensile strength or stretch, disregarding the kind of hide that was used for producing the leather, shows that the fiber course over the entire surface of the skin is not at all uniform but rather that there are characteristic differences in the various locations. As, without doubt, the connective tissue fiber bundles are **woven** together in an irregular, criss-cross fashion, the established regularity of the tensile strength and stretch in the lengthwise and cross-wise directions indicates that in this **weaving** in individual locations there are certain preferred

directions of fiber course which are scattered over the entire surface of the skin in a certain regular pattern. It must be assumed that in those locations where the tensile strength is high and stretch low in the direction .dblvert. to the backbone or on the other hand where tensile strength is low and stretch is high in the direction .perp. to the backbone, that there the fiber direction within the fiber network is principally .dblvert. to the backbone as, e. g., in the entire backbone and in the neck. On the other hand, in locations where tensile strength is lower and stretch higher in the .dblvert. than in the .perp. direction, as in the sides and butt, the preferred fiber direction is .perp. to the backbone. Between the sides and backbone and between the neck and butt, resp., there is a gradual transition between the two extremes. While the evaluation of the findings on tensile strength and stretch lead to interesting conclusions regarding fiber direction, on the other hand the values for sp. wt. give a valuable criterion for the d. of the fiber network. The greater the sp. wt. the more **tightly** are the fibers and fiber bundles knit together; the smaller the sp. wt. the looser is the weave. Therefore the shanks and the shell part of the butt and the part on each side of the backbone have the firmest texture. The rest of the butt possesses an av. d. of weave and toward the neck and sides the weave becomes looser and looser up to sponginess in the extreme case.

=> log y  
COST IN U.S. DOLLARS

|                     | SINCE FILE ENTRY | TOTAL SESSION |
|---------------------|------------------|---------------|
| FULL ESTIMATED COST | 108.18           | 108.60        |

| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
| CA SUBSCRIBER PRICE                        | -5.21            | -5.21         |

STN INTERNATIONAL LOGOFF AT 07:44:42 ON 04 MAR 2003